D91/3.1 D23

The fastest, surest couplings known

JUST SLIP ADAPTOR INTO COUPLER AND PRESS CAM LEVERS DOWN

PAYENT OFFICE

DIVISIONS 81 & 82



PATENT OFFICE
WAR 9 1961
DIVISIONS 81 & 82

OPW MINIOR

QUICK COUPLING ASSEMBLIES couple and uncouple instantly!

No threads or lugs to engage, no twisting friction against gasket, no tools or wrenches required for a fully leakproof connection that holds fast, stays tight.

Slip on - Cams tighten - Hold tight - Never fail

RETURN TO

DESIGN DIV

BRONZE • ALUMINUM • MONEL • STAINLESS STEEL • SEMI-STEEL

PRECISION ENGINEERED PRECISION MADE

OPW KANDK

QUICK COUPLING ASSEMBLIES

OPW KAMLOKS add extra life to hose . . . guarantee greater security in handling all types of liquids.

OPW KAMLOKS' perfectly leakproof seal is made instantly without twisting, kinking or straining of hose. Merely slip Adaptor into Coupler and press cam levers down.

OPW KAMLOKS speed delivery, save time and labor.

OPW KAMLOKS operating pressures up to 200 psi, depending on size and kind of metal.

OPW KAMLOKS can also be used on suction lines —they stay leakproof under vacuum.

OPW KAMLOKS are made of bronze, aluminum, semi-steel, monel and stainless steel. See price list or chart (Page 7) for sizes and types. Other metals may be supplied on special order.

ALL KAMLOKS 100% GAUGED FOR

COMPLETE INTERCHANGEABILITY

All styles of Adaptors fit in all styles of Couplers of the same size.



633-A ADAPTOR



633-B COUPLER



633-F ADAPTOR



633-B COUPLER

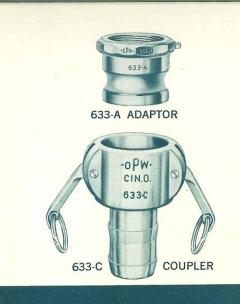


633-E ADAPTOR

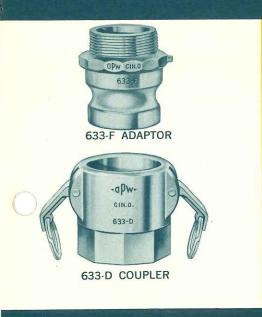


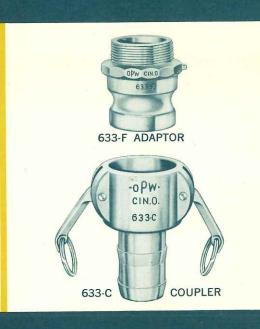
633-B COUPLER





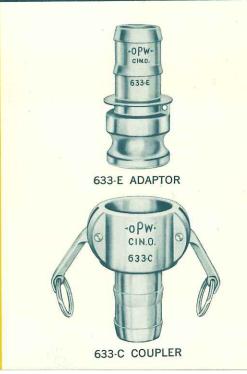
















634-A DUST PLUG



633-B COUPLER



634-A DUST PLUG



633-D COUPLER



634-A DUST PLUG



633-C COUPLER





Make field repairs quickly by simply slipping OPW KAMLOK Shank Type Adaptors and Couplers into hose, using any type clamp or band. Leakproof, lighter weight, easier to handle, faster, surer!

- **OPW KAMLOK** Shank Type Adaptors eliminate threaded fittings on hose, reduce weight.
- Raised ribs on shanks provide more secure banding, engage hose more firmly.
- Protective collar on Shank Type Adaptors makes smooth, flush fit of hose, prevents splitting and wearing of hose ends.



No. 633 LA



No. 633 LB



No. 633 PA 3" x 4"



No. 633 PB



No. 633 AW (aluminum) 4"x4", 6"x6" (bronze) 3" x 3½", 3" x 3.22",

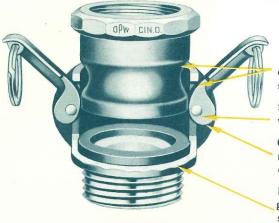


No. 633 DW (aluminum).
3" × 3 ½",
4" × 4", 6" × 6½"
(bronze)
2" × 2½",
3" × 3½",
3" × 3.½",
4" × 4",

OPW KAMLOK COUPLERS'

outstanding features

FOR STURDY DURABILITY AND EASE OF HANDLING . . . DEPENDABLE LASTING LEAKPROOF SEAL



OPW CIN. O.

Heavy wall thickness throughout for extra safety. No weak spots.

Strong, durable cam arm pins will not rust or bind.

Cam arms have accurately machined surfaces for easy closing.

Recess in Coupler holds the gasket firmly in place . . . assures proper placement. Gasket cannot fall out.

Couplers and Adaptors are available from stock in bronze, aluminum, semi-steel, monel and stainless steel.

Precision machined, every Coupler and Adaptor is individually master gauged, inspected and tested to assure complete interchangeability of ALL OPW KAMLOK Couplers & Adaptors. All mating surfaces are accurately machined to insure completely leakproof service.

Gaskets of specially compounded Buna N are standard. See Recommendation Chart Page 6 for special gaskets for special services.

RECOMMENDED OPERATING CONDITIONS

METALS	SIZES	NORMAL OPERATING PRESSURE IN LBS./SQ. IN.	MAXIMUM OPERATING TEMPERATURE °F FOR GASKET COMPOUNDS
ALUMINÚM	½" through 2½" 3" and 4" 6"	125 100 75	225 300 * 225 300 * 225 300 *
BRONZE	½" thru 2½" 3" and 4"	125 100	225 450 * 225 450 *
MONEL	1" thru 4"	200	225 550
STAINLESS STEEL	½" thru 2", 3"	200	225 550
SEMI-STEEL	1½" and 2"	100	225 450 *

OPW KAMIOK RECOMMENDATION CHART FOR CHEMICAL SERVICE

	SEMI STEEL	STAINLESS STEEL	MONEL	BRONZE	ALUMINUM	
Acetate Solvents, Crude			X	X	X	P
Acetate Solvents, Pure		X	Χ	^		0
Acetic Acid, Crude Acetic Acid, Pure		X	X		Х	0
Acetic Acid Vapors	-	X				0
Acetic Anhydride		Х	Х		Х	Р
Acetone	Х	X	Х	Х	Х	Р
Acetylene	X	Х	Х		X	0
Alcohols	Х	X	X	X	Х	0
Aluminum Sulfate		x	х			0
Ammonia Gas	Х	X	X		X	0
Ammonium Chloride			X			0
Ammonium Hydroxide	4.0		Male		v	S
Ammonia Liquors	X	X			X	0
Ammonium Nitrate	X	Х			^	
Ammonium Phosphate (Mono-Basic)		X				0
Ammonium Phosphate	N = 16.	1000		Bull and		0
(Di-Basic)		X	Х		Х	0
Ammonium Phosphate	X	x	x	12.3	X	0
(Tri-Basic) Ammonium Sulfate	X	-	X			0
Asphalt	X	X	X	X		S
Beer		Х	Х	X	Х	Р
Beet Sugar Liquors	Х	Х	Х		Х	Р
Benzine or Benzol	Х	X	X	X	X	Q
Benzine	Х	X	Х	Х	Х	0
Borax	Х	X	X			0
Boric Acid		X	X		X	0
Butane, Butylenes, Butadiene	х	x	x	x	X	0
Calcium Bisulfite	ж.	X				0
Calcium Chloride	X	TO THE	Х	X		0
Cane Sugar Liquors	X	X	X	X	X	Р
Carbolic Acid or Phenol		X	X		Х	Р
Carbon Dioxide, Dry	X	X	X	X	X	0
Carbon Dioxide, Wet		X	Х		Х	0
Carbon Disulfide	X	Х			X	Q
Carbonic Acid Carbonated Beverages		X	x		X	P
Carbon Tetrachloride		- ^	X	1		0
Chlorine, Dry	X		Х			*
Chlorex	X		X	X		*
Chromic Acid		X				*
Citric Acid		X	Х		X	P *
Coke Oven Gas	X	X			X	0
Copper Sulfate		Х		X	-	*
Core Oils Cottonseed Oil	X	X	X	^		0
Creosote, Crude	X	X	X	+	X	0
Doctor Solution	X	X	X			*
Ethers		X	X	X	X	Q
Ethylene Glycol	Х	X	Х	X	X	0
Ferric Sulfate		X				0
Formaldehyde		X	X	X	X	0
Freon, Wet			Х	Х	X	0
Freon, Dry	X	X	X	X	X	0 P
Furfural	Х		Х	Х	X	0
Gasoline, Sour	v	X	×	X	X	0
Gasoline, Refined	X	X	X	A	X	P
Gelatine Glucose	X	X	X	X	1 x	P
Glucose	X	X	x	x	X	0
Glycerine or Glycerol	X	X	X	X	X	0
Hydrocyanic Acid						
or Hydrogen Cyanide		X	X		X	*
Hydrogen Gas	X	X	X	X	X	0
Hydrogen Peroxide	1,224	X	X		X	0
Hydrogen Sulfide and Organic Sulfur Compounds	x	x	186		×	
Hydrogen Sulfide, Wet	^	x			X	*
Lacquers and						
Lacquer Solvents		X	X	X	Х	Q
Lime Sulfur	X	X	X			0
Magnesium Chloride	v	X	X			S
Magnesium Hydroxide	X	X	X	X	X	0
Magnesium Sulfate Mercury	X	X	- x	-		0
Milk	^	x	- "		X	P
Molasses	X	X	X	X	X	P
Natural Gas	X	X	X		X	0
			No.			TO SEE MA
Nitrating Acids (Sulfuric + Nitric =		x	.0		X	S
1% or less) Nitric Acid, Pure		X			*	S
Oleic Acid, Pure		X	X		X	Q
Oxalic Acid			X		X	0
Oxygen	X	X	X	X	X	0
		recommenda	tion			

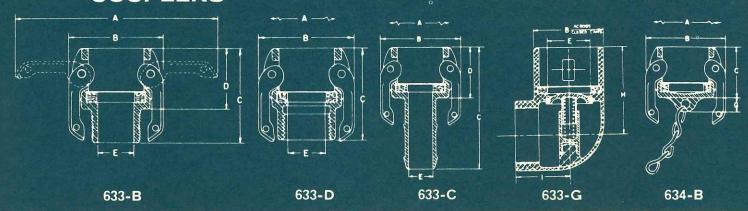
	SEMI	STAINLESS	MONEL	BRONZE	ALUMINUM	GASKET COM- POUND SYM.
Palmitic Acid	OTELL	X	Х		X	0
Petroleum Oils,			100			0
(Not refined) Petroleum Oils.	X					0
(Refined)	x	x	X	Х	X	0
Phosphoric Acid, Pure						
(<45%, cold)		X				*
Phosphoric Acid, Pure (<45%)						
Picric Acid (molten)	Х	X				Q
Picric Acid (morten)		_ ^				
(Aqueous Solution)	E5-W	X			X	*
Potassium Chloride	Х		X	X		0 S
Potassium Hydroxide			X	X	X	0
Potassium Sulfate	Х	X	X	X	^	0
Propane Gas Rosin, Dark	X	X	X	^	X	*
Rosin, Light	^	X	X		X	*
Shellac, Orange	X	X	Х	Х	X	*
Shellac, Bleached		X	Х		X	* 1
Soda Ash or			V			0
Sodium Carbonate	X	Х	X			
Sodium Bicarbonate or Baking Soda	ERE.	х	х	No was 1	W. D. W. C.	0
Sodium Bisulfate		N HOUSE	Х			0
Sodium Chloride	X		X	X		0
Sodium Cyanide	X	X				0 S
Sodium Hydroxide	X		X		X	0
Sodium Metaphosphate Sodium Nitrate	V	X	X		X	0
Sodium Perborate and	Х	^	^		~	
Sodium Peroxide		Х •	X		X	0
Sodium Phosphate	- NIES				x	
(Mono-Basic)		X	Х		^	
Sodium Phosphate (Di-Basic)	100	X	X	X	X	*
Sodium Phosphate			100			*
(Tri-Basic)	X	X	X			0
Sodium Silicate	X	Х	X	X		0
Sodium Sulfate Sodium Sulfide	X	X	X		+	0
Sodium Thiosulfate	^					
or "Hypo"		X				0
Stearic Acid		X	X		X	0
Sulfate Liquors	X	Х	X		X	0
Sulfur	Х		X		^	*
Sulfur Chloride Sulfur Dioxide, Dry	X	X	X	X	X	*
Sulfur Trioxide, Dry	X	X	X	X	X	•
Sulfuric Acid						
(98% to fuming)	X	S bolton				*
Sulfuric Acid (75-95%)	X		~		1	S.
Sulfuric Acid (10-75%)	The Breet		X			S
Sulfuric Acid (<10%)		V	^			*
Sulfurous Acid	X	X	X	X	X	0
Tartaric Acid	^	X	X	- ~	X	0
Toluene or Toluol	X		X	X	X	Q
Trichloroethylene			Х			Q
Turpentine		X	X		X	0
Varnish		X	X		X	0
Vegetable Oils	X	Х	Х	Х	X	O P
Vinegar		Х	X			-
Water, Acid Mine (Containing Oxidizing Salts)	X				0
Water, Acid Mine		THE PARTY			The Local	
(No Oxidizing Salts)			X			0
Water, Fresh Boiler Feed, etc.	x		x	×	E State of	0
Water, Distilled					To the second	The same
(Laboratory Grade)		X	P. N.		Х	Р
Water, Distilled	V	x	×	x	×	0
(Return Condensate)	X	^	^	^		
Water, Salt (Sea Water, etc.)			X	Х		0
Whiskey and Wines		Х				P
Zinc Chloride			X			0
Zinc Sulfate			X	100		0

COMIT COME STIME	
Standard "O"	
Special "P"	
Special "Q"	
Special "S"	

ALL RECOMMENDATIONS BASED ON PURE CHEMICAL AT NORMAL TEMPERATURE UNLESS OTHERWISE NOTED. SEE ENGINEERING DEPARTMENT FOR RECOMMENDATION ON SERVICE NOT LISTED.

GENERAL DIMENSIONS

COUPLERS



																																124																					_
	CAT. NO'S.					6	33	- A					Г				63	3-1	3				-				63	3-0	2								63	3-C)								63	3-	Ε				
	SIZES	1 2	3	1	1:	1 1	1 2	2	21/2	3	4	6	1 2	3 4	1	1 4	1 1/2	2	2 1/2	3	4	6	1/2	34	1	1 4	1 1/2	2	2 1/2	3	4	6	1/2	3 4	1	14	1 1/2	2	2 1/2	3	4	6	1/2	3 4	1	14	1 -	2 2	1 3	5 4	4 6	ò	
	SIZE OF THREAD OR HOSE SHANK	1 2	3 4	1	17	1 1	1 2	2	21/2	3	4		1/2	3 4	1	14	1 1/2	2	2 1/2	3	4	Т			ġ.	14	1 1/2	2	2 1/2	3	4	6	1/2	3 4	1	14	1+	2	2 1/2	3	4	6		3 4	- 1	14	1-	2 2	2 2	1 3	5 4	4 6	5
A D	D. OF COUPLERS AND UST CAP WITH CAM ARMS XTENDED												45	45	5 3	74	7 1/2	7 7 8	8 3	10	11	16	3		5 출	7 4	7 1/2	7 7	8 3	10	11	24	45	45	5 3 8	74	7 1/2	778	83	10	11	16	3 8				Γ						
100	MAX O D					Ī	1			ŧ.			2 1/8	2	21/2	3	3 1	3 3/4	4 1/4	54	6	10			2 1/2	3	3 8	3 4	44	54	6 8	10	2	2 1	21/2	3	3書	34	44	5 4	6	10	1 4	38	5	178	2	4 2	783	3 4	1 5	4 7	<u> </u> 52
СО	VERALL LENGTH	1 5 8	1 5/8	7 8	2	2	1 2	3 6	23/4	23/4	34		2									41/2	3		3 7 8	4	44	5	5 3	6 4	6 3	87	2	2	2 1/2	23	2 7/8	3 1/8	3 ½	3 34	3 3	4	2	3 2	4	4	3 4	5	ੂ 5	1 6	1 -	7 8	34
D E	XPOSED LENGTH												. 1									213			5	1 7 8	1 7 8	2 1/8	24	24	2 1/2	2												1 5	17	2 1	2	<u> </u>	3 2	· 2	1/2	3 3	16
E M	MN. I.D.	7 8	7 8	1	14	- 1	1 1	7 8	2 1	2 7 8	34	5 7 B	3 4	34	1	14	1 1/2	1 7 8	2 3	2 7 8	3 4	54			3	T	14	134	24	234	3 1/2	5#	3 4	3 4	1	13	1 1/2	2	2흥	2 7/8	34	5	3	5/8	34	1	1 -	1	3 2	42	3 3	½ 5	11
F C	MAX. O.D. (ACROSS CORNERS OF ADAPTORS)	13	1 3 8	15	2	2	3 2	78	3 8	4 3 8	5 ½	7 32																																									
G E	ISTANCE THAT CHAIN LUG			3 8	38	- Complete	3 8	3/8	3 8	3 8	3 8												Г										Γ																				
H D	DISTANCE FROM C.L. TO ADAPTOR INLET OF ELBOW.																														-																						
	OISTANCE FROM C.L.TO THREADED END OF ELBOW																																																				
	CAT. NO'S.					6	33	-F					633-G														63	3-	н				634-A										634-B										7
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Г	CAT. NO'S.					6	33-	F							6	33	-G								63	3-h	+							6	34-	Α					1-35-3			63	4-E	3			
	SIZES	1/2	34	1	14	1 - 2	2	2-	3	4	6	1/2	34	1	4	1 1	2 2	1/2	3	4 6	1 2	34	1	14	1 1/2	2	2 1/2	3	4	6	1/2	3 1	1	1-	2	2 2-2	3	4	6	1 2	3 4	- 1	14	1 1/2	2	21/2	3	4	6
	SIZE OF THREAD OR HOSE SHANK	1 2	3 4	1	1 4	1 1/2	2	2 -	3	4					ı	1 2	2 2	1/2	3	4					1 1/2	2	2 1/2	3	4												I								
A	O.D. OF COUPLERS AND DUST CAP WITH CAM ARMS EXTENDED.													100											1																4	5 5 3 B	74	7 1/2	7 7 8	83	10	11	16 8
В	MAX. O.D.														3	3 3	3 4	4 5	₺ 6	3					3 8	3 3	44	5 4	6 3			1 1	1 1	7 2	8 2	1/2 3	3	5 43	6	5	2	1 2 ½	3	3 3	33	44	54	6 3	104
С	OVERALL LENGTH	2 4	24	23	3 🖁	3	3 ह	4	4	43	5																					4 1	1	3 1 1	2	2	2	2 1	24	ī	101	3 5 8	178	1 7	2 1/8	24	23	28	2 5
D	EXPOSED LENGTH	1 1/2	1 2	1 7 8	2 1	2	2	23	23	3 4	34					Ì																										-							
E	MIN, I.D.	7 8	7 8	1		_	-	-	_	3 3 4	-	_			ſ,	7 1	3 2	4 2	3 3	11					17	13	24	234	311			7 8	ı	41	1 1	7 2 Z	42	3	5 5	7 8									
F	MAX. O.D. (ACROSS CORNERS OF ADAPTORS)	1 1/2	1 1/2	15	2	2 3	2	3 }	4	5 1/2	73																																						
G	DISTANCE THAT CHAIN LUG EXTENDS FROM BODY			3 8	3 8	3 8	3/8	3 8	3 8	38																			1000			3 8	1	3 8	38	3 8	3 8	3 8	1 2		3	3 8	3 8	3 8	3 8	3	3 8	3 8	1/2
Н	DISTANCE FROM C.L. TO ADAPTOR INLET OF ELBOW														3	1/2 3	3 4	1 4	1/2	7 8					3 1/2	33	4 	4 1/2	4 7 8	či.																1 2			
1	DISTANCE FROM C.L. TO THREADED END OF ELBOW														ļ	7 2	3 2	3 3	1 3	34					1 7 8	2 3	23	3 🖁	33																				

No. 633-G OPW KAMLOK Coupler (90°) Elbow Female Pipe Thread with Check Valve. Check Valve holds liquid in hose when uncoupling-prevents excessive spillage.



No. 633-H OPW KAMLOK Coupler (90°) Elbow Female Pipe Thread without Check Valve.

Use on outlet end of hose with drop tubes for underground tank filling. Drop tubes may be screwed directly into Coupler or fitted with Adaptors. Use with jumper hose when check valve is not desired.



No. 634-A Dust Plug No. 634-B Dust Cap

Protect your product against foreign matter - use Dust Plugs and Caps. Dust Caps for all Adaptors and Dust Plugs for all Couplers. They protect against contamination of fluid by preventing dirt from entering Couplers and Adaptors. They also protect Couplers and Adaptors against abrasion and damage.





OPW KAMLOK Cam Arm

All OPW KAMLOK Cam Arms of extra strong construction. Replacement Cams are sup-

plied complete with finger rings and pins. Finger rings make uncoupling easy at all times. When ordering, specify size of Coupler and body material.* Security chains with two "S" hooks for attaching Dust Caps or Plugs to Couplers or faucets are available. Chains are 6" long.



* For Liquid Nitrogen Service, specify malleable iron Cam Arms.



OPW KAMLOK Gasket

Standard OPW KAMLOK Gaskets are lathe cut rings of Buna N. Gasket is groove-retained inside Coupler. If replacement is needed, specify size of Coupler. Special Gaskets are available for most all services. See Recommendation Chart (Page 6).



No. 296-H Fueling Nozzle Tube

Brass tube assembly consists of male threaded adaptor and brass tube. Standard length 18". Other lengths optional on special order.

STOCK SIZES:

PIPE THREAD	IURE	PIPE THREAD	IUBE
1½" x 1½" 0.D. —	18" long	2" x 11/8" 0.D. —	18" long
1½" x 1¾" 0.D. —	18" long	2" x 21/8" 0.D. —	18" long
1½" x 15%" 0.D. —	18" long	3" x 11/8" O.D. —	18" long
2" x 13/8" O.D. —	18" long	3" x 23/8" 0.D. —	18" long
2" x 15/8" 0.D. —	18" long	3" x 21/8" O.D. —	18" long
2" x 13/4" O.D. —	18" long	3" x 31/4" 0.D. —	18" long

SPECIAL OPW KAMLOKS





No. 633 AD







No. 633 BP-No. 633 BH 21/2" x 3", 3"



(hose thread) -2" x 4", 2½" x 4", 3" x 4", 3", 2½" x 3"



No. 633 CC (with cable clamp)—4"



No. 633 DH



No. 633 J



No. 633 FF 2 22" x 18)



No. 633 K



No. 633 FH



No. 633 SH



No. 633 T 3"x2", 3"x3", 3" x 4"



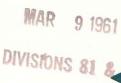
No. 634 BL (dust cap)-3"



No. 635 2" x 2" x 1", 2" x 2" x 3"



PATENT OFFICE





OPW CORPORATION

JORDAN INDUSTRIAL SALES DIVISION 6013 WIEHE ROAD CINCINNATI 13, OHIO ELmhurst 1-1352